

REMARKS

Claims 1-7 and 9-33 are all the claims pending in the application, prior to the present Amendment.

Applicants have canceled claims 1-7 and 9-27, and have added new dependent claims 34-41 that depend, either directly or indirectly, from independent method claims 28 and 29. Thus, the claims that remain for examination are claims 28-41, with claims 1-27 having been cancelled.

At page 2 of the Office Action, the Examiner states that he will not acknowledge applicant's claim for priority because there is an inconsistency between the oath that was filed and the statement at page 1 of the specification under the heading "Cross Reference to the Related Applications."

In particular, the Examiner states that the oath indicates that the present application is a National Stage entry of a PCT filing. The Examiner states that the specification at page 1, lines 1-11 indicates that the present application is a national application under 35 U.S.C. § 111(a). The Examiner states that a National Stage application is different from an application under 35 U.S.C. § 111(a) and, therefore, he is not acknowledging priority until this inconsistency is resolved.

In response, applicants have amended page 1 of the application to indicate that the present application is a National Stage application and to remove reference to 35 U.S.C. § 111(a).

With respect to the Information Disclosure Statement of May 13, 2005 and the documents that were previously crossed off by the Examiner on the Form PTO/SB/08, the Examiner now states that these items were inadvertently crossed off. The Examiner attaches to the Office Action a new copy of this Form in which he indicates that all references on the Form were considered.

The Examiner states that he presumes that the "XP" numbering format corresponds to the "DATABASE CA" documents cited on the applicant's IDS.

The XP code identifies documents that are in the patent database of the European patent office.

The Examiner states that he does not read Japanese, and many of the copies that were provided were of poor quality, and therefore little, if anything, could be made out. The Examiner states that only the English abstracts were considered, and that if there is material information in the untranslated portions, it was not considered.

As applicants previously advised the Examiner, the documents were cited in either the International Search Report or the present specification. The Examiner is required to consider the references with respect to these citations also.

In the Office Action, the Examiner sets forth numerous comments on previous rejections of the claims, objects to claim 9 and rejects it under the first paragraph of 35 U.S.C. § 112, rejects claim 13 under 35 U.S.C. § 112/101 and withdraws claims 24-26 as being directed to a non-elected invention. Inasmuch as claims 1-27 have been canceled, applicant believes that no further comment is necessary with respect to these claims.

Applicant, however, does address the term “non-graphitizable,” which appeared in claim 9, and which now appears in new claims 36, 27, 28, 40 and 41. The Examiner has questioned whether this term is supported in the present specification. The Examiner states that he believes the term is not supported by the specification, and that he is entering a new matter rejection elsewhere in the Office Action.

Applicant continues to rely on U.S. Patent 6,806,003, which applicant previously cited, as support for the fact that the term “hard carbon” as used in the present specification refers to a “non-graphitizable” carbon.

Claims 1-7, 9, 10, 13, 14 and 28-33 have been rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent 4,937,223 to Yamaguchi.

In addition, claims 1-7, 9, 10, 13, 14 and 28-33 have been rejected under 35 U.S.C. § 102(b) as anticipated by or in the alternative, under 35 U.S.C. § 103(a) as obvious over Yamaguchi.

Applicant submits that Yamaguchi does not disclose or render obvious the subject matter of the present claims and, accordingly, requests withdrawal of this rejection.

As noted above, claims 1-27 have been canceled, thus leaving claims 28-33 and new claims 34-41 as being subject to this rejection.

The present invention as set forth in claim 28 is directed to the method for producing an active carbon comprising a step of adding an alkaline earth metal compound to a raw material of active carbon and heat-treating it, and a step of mixing the carbonized product produced by the heat treatment with an alkali metal compound and heating and thereby activating it.

Further, the present invention as set forth in claim 29 is directed to a method for producing an active carbon, comprising a step of adding an alkaline earth metal compound to a raw material of active carbon and heat-treating it in the vapor of an alkali metal compound, and a step of mixing the carbonized product produced by the heat treatment with an alkali metal compound and heating and thereby activating it.

The pore diameter peak distribution of the active carbon obtained by the present invention has a peak top within the range of 10 to 15Å. An active carbon having a pore distribution with a peak top within the above range is advantageous to attain high capacitance of an electric double layer capacitor produced thereof. The present inventors have found that it is necessary to add an alkaline earth metal compound to a raw material of active carbon and heat-treat (carbonize) it in order to obtain the active carbon having a pore distribution with a peak top within the above-mentioned range. The above-mentioned pore distribution cannot be attained simply by adding an alkali metal compound.

Yamaguchi discloses preparation of activated carbon by adding alkali to lignin or its derivative and then subjecting it to heat treatment. See column 2, lines 31-61. Although Yamaguchi lists a hydroxide or carbonate of an alkaline earth metal as an example of alkali, Yamaguchi states that sodium hydroxide or potassium hydroxide, which is a hydroxide of an alkali metal, is most suitable. Yamaguchi does not disclose any working Example of the use of an alkaline earth metal compound.

Also, Yamaguchi only describes the heat treatment in which carbonization and activation are carried out simultaneously. Yamaguchi does not disclose or suggest the process of the present invention in which an alkaline earth metal compound is added to a raw material of active

carbon and heat-treating it, and then mixing the carbonized product produced by the heat treatment with an alkali metal compound and heating and thereby activating it.

Further, the pore diameter distribution of the obtained activated carbon of Yamaguchi has a peak top at a diameter larger than that of the active carbon of the present invention, as can be seen from Fig. 1 of Yamaguchi.

Accordingly, the method of the present invention is different from that disclosed by Yamaguchi and would not have been obvious from the teachings of Yamaguchi.

Also, in the present invention, as stated in claim 30, the heat treatment (carbonizing step) is preferably performed by two stage step, as described at page 11, lines 10 to 20 of the specification. Yamaguchi does not contain any teachings in this respect at all.

In view of the above, applicant submits that Yamaguchi does not disclose or render obvious the subject matter of the present claims and, accordingly, requests withdrawal of this rejection..

Claims 1-4, 7, 9-15 and 27-31 have been rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent 6,414,837 to Sato et al.

Further, claims 1-4, 7, 9-15 and 27-31 have been rejected under 35 U.S.C. § 102(b) as anticipated by or in the alternative, under 35 U.S.C. § 103(a) as obvious over Sato et al.

In addition, claims 1-7, 9-15 and 24-33 have been rejected under 35 U.S.C. § 103(a) as obvious over Sato et al.

As noted above, claims 1-27 have been canceled, thus leaving claims 28-33 and new claims 35-41 as being subject to these rejections.

Applicant submits that Sato et al do not disclose or render obvious the subject matter of the present claims and, accordingly, requests withdrawal of this rejection.

Sato et al disclose manufacturing of an active carbon by carbonizing any of various material and then activating the carbonized material. As an example of the chemical activating process, Sato et al teach that the carbonized material is uniformly impregnated with a chemical, such as calcium carbonate, and then heat treated in an inactive gas atmosphere to produce activated carbon. See column 7, lines 38-65. However, Sato et al do not teach adding an alkaline earth metal compound in the step of carbonization, which precedes the activating step.

Accordingly, the method of the present invention is different from that disclosed by Sato et al and would not have been obvious from the teachings of Sato et al.

Also, in the present invention, as stated in claim 30, the heat treatment (carbonizing step) is preferably performed by two stage step, as described at page 11, lines 10 to 20 of the specification. Sato et al do not contain any teachings in this respect at all.

In view of the above, applicant submits that Sato et al do not disclose or render obvious the subject matter of the present claims and, accordingly, requests withdrawal of this rejection..

Claims 1-33 have been rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent 6,414,837 to Sato et al in view of the following five references: (a) U.S. Patent 7,061,749 to Liu et al, (b) U.S. Patent 6,842,328 to Schott et al, (c) U.S. Patent 6,491,789 to Niu, (d) U.S. Patent 6,454,816 to Lee et al and (e) U.S. Patent No. 6,205,016 to Niu.

As noted above, claims 1-27 have been canceled, thus leaving claims 28-33 and new claims 34-41 as being subject to this rejection.

Applicant relies on the arguments set forth above as to why claims 28-41 are patentable over Sato et al. The five secondary references do not supply the deficiencies of Sato et al.

In view of the above, applicant requests withdrawal of this rejection.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

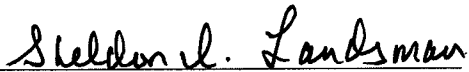
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